from which we find as the value of ϕ the colatitude, by the common formula tan $\phi = \cot \delta \cdot \cos H$,

$$\phi = 38^\circ \; 52' \; 6\cdot65'' \text{ by N.};$$

and from June 1 we have in the same way

$$1^h \; 6^m \; 58\cdot69^s = 16^\circ \; 44' \; 40\cdot04'',$$

and the

N.P.D. of η *Ursæ Majoris* being $= 40^\circ \; 3' \; 23\cdot82''$,

$$\phi = 38^\circ \; 50' \; 19\cdot69'' \text{ by S.}$$

Whence mean of N. and S.

$$\phi = 38^\circ \; 51' \; 13\cdot17'',$$

a result in which I have little confidence, though I know of nothing but mere shifting of the instrument to affect it.

Note on the Polarisation of Coggia's Comet.   By A. Cowper Ranyard, Esq.

On the 1st, 2nd, and 4th of July I examined the light of the comet with a double image prism, but could not with *certainty* detect a difference between the brightness of the two images. On the 6th I was for the first time able to satisfy myself that there were undoubted traces of polarisation: the component in excess being that in the plane passing through the Sun's esti- mated place below the horizon. The difference of brightness was best observed when the double image prism was turned so that the line joining the nuclei of the two images was at right angles to the axis of the tail, that is, at right angles to the line joining the Sun and Comet: 90° from this position the two images partly overlapped, and their relative intensity was not so easily compared; no traces of bands could be made out with a Savart, nor could I perceive any difference in tint between the two fields of a biquartz when placed in the principal focus of a 4-inch telescope, and examined with a Nicol's prism packed amongst the lenses of an erecting eye-piece.

I continued to examine the polarisation of the comet with a double image prism almost nightly until the 14th, and it appeared to me that the difference in the brightness of the two images continued to become more and more conspicuous. This was specially the case with respect to the relative intensity of the two images of the tail; but I should not like to speak with

certainty of the increase of polarisation of the envelopes in the immediate neighbourhood of the nucleus.

On the 13th I estimated that the brightness of the tail at a distance of three-fourths of a degree from the nucleus in one image was certainly more than double the brightness of the tail at a similar part of the other image. The relative brightness of the two images of the head of the comet might possibly be represented by the numbers 5 and 4; and the contrast between the brightness of the images of different portions of the tail seemed to increase with their distance from the nucleus.

The presence of a continuous spectrum in the tail of the comet precludes the idea of its being composed entirely of incandescent gas; and if it were merely a cloud of fine dust dispersing the Sun's rays, we should expect its light to be strongly polarized. I feel therefore driven to conclude either that the fine dust is incandescent, or that the individual particles, liquid or solid, which go to make up the continuous spectrum part of the tail are large compared with the wave-length of light.

Observations of Coggia's Comet (III. 1874). By E. J. Stone, Esq., M.A., F.R.S., Her Majesty's Astronomer, Cape of Good Hope.

The following observations of Coggia's Comet (III. 1874) were made by me on 1874, July 31. One of the comparison stars on this day was " 299 Cape Catalogue 1860," or " Lacaille 3081." The mean places for 1874, January 1, are—

R.A.	N.P.D.
h m s	o ' "
7 52 39·06	119 59 50·69.

Cape Mean Times.	Diff. in R.A. Comet—Star.	Diff. in N.P.D. Comet—Star.	R.A. Comet.	N.P.D. Comet.
h m s	m s	' "	h m s	o ' "
17 10 31·7	+4 13·50	*5 3·98	7 56 51·95	120 4 46·14
17 22 57·5	+4 13·96	6 39·54	7 56 52·41	120 6 21·70
*17 33 52·6	+4 14·04	7 53·71	7 56 52·49	120 7 35·87

The differences in N.P.D. and R.A. have been corrected for refraction, but not for parallax.

The observations were made with the New Equatoreal by Simms.

The comet has been observed on July 29, 30, 31, and August 3, but the positions of the other comparison stars are not known at present.

The comet appeared of about the brightness of a third magnitude star.

* The times for this observation were entered from the clock by Mr. W. H. Finlay.